LIST OF CONTENTS

VOLUME 38 NUMBER 1 1990

COMMENTARY

N. R. Smalheiser — Neuronal growth cones: an extended view — 1

RESEARCH PAPERS

K. A. Sharkey, P. J. Coggins, W. Tetzlaff, H. Zwiers, M. A. Bisby and **J. S. Davison** — Distribution of growth-associated protein, B-50 (GAP-43) in the mammalian enteric nervous system — 13

R. Lent, C. Hedin-Pereira, J. R. L. Menezes and **S. Jhaveri** — Neurogenesis and development of callosal and intracortical connections in the hamster — 21

M. Pirchio, S. Lightowler and **V. Crunelli** — Postnatal development of the T calcium current in cat thalamocortical cells — 39

G. W. Arbuthnott, N. K. MacLeod, D. J. Maxwell and **A. K. Wright** — Distribution and synaptic contacts of the cortical terminals arising from neurons in the rat ventromedial thalamic nucleus — 47

N. Zhang, F. Walberg, J. H. Laake, B. S. Meldrum and **O. P. Ottersen** — Aspartate-like and glutamate-like immunoreactivities in the inferior olive and climbing fibre system: a light microscopic and semiquantitative electron microscopic study in rat and baboon (*Papio anubis*) — 61

M. F. Kritzer, R. B. Innis and **P. S. Goldman-Rakic** — Regional distribution of cholecystokinin binding sites in macaque basal ganglia determined by *in vitro* receptor autoradiography — 81

R. P. Kesner, K. A. Crutcher and **H. Omana** — Memory deficits following nucleus basalis magnocellularis lesions may be mediated through limbic, but not neocortical, targets — 93

J. W. McDonald, F. S. Silverstein and **M. V. Johnston** — MK-801 pretreatment enhances *N*-methyl-D-aspartate-mediated brain injury and increases brain *N*-methyl-D-aspartate recognition site binding in rats — 103

S. Nakano, K. Kogure and **H. Fujikura** — Ischemia-induced slowly progressive neuronal damage in the rat brain — 115

H. Onodera, H. Aoki, T. Yae and **K. Kogure** — Post-ischemic synaptic plasticity in the rat hippocampus after long-term survival: histochemical and autoradiographic study — 125

V. E. Lopantsev and **V. D. Taranenko** — Paroxysmal afterpotentials and role of calcium-dependent potassium conductivity in neuronal activity of strychninized neocortex — 137

I. M. L. Donaldson and **P. C. Knox** — Directionally-specific effects of afferent signals from the extraocular muscles upon responses in the pigeon brainstem to horizontal vestibular stimulation — 145

P. T. Hargittai, A. M. Butt and **E. M. Lieberman** — High potassium selective permeability and extracellular ion regulation in the glial perineurium (blood–brain barrier) of the crayfish — 163

A. M. Butt, P. T. Hargittai and **E. M. Lieberman**	Calcium-dependent regulation of potassium permeability in the glial perineurium (blood–brain barrier) of the crayfish	175
M. Dowton, M. K. Boelen, I. G. Morgan and **I. W. Chubb**	Light inhibits the release of both [Met^5]enkephalin and [Met^5]enkephalin-containing peptides in chicken retina, but not their syntheses	187
K. Yoshioka, M. Sakuma and **M. Otsuka**	Cutaneous nerve-evoked cholinergic inhibition of monosynaptic reflex in the neonatal rat spinal cord: involvement of M_2 receptors and tachykininergic primary afferents	195
H. S. Sharma, F. Nyberg, Y. Olsson and **P. K. Dey**	Alteration of substance P after trauma to the spinal cord: an experimental study in the rat	205
C. J. Emmett, W. Jaques-Berg and **P. J. Seeley**	Microtransplantation of neural cells into adult rat brain	213
H. Kiyama and **P. C. Emson**	Distribution of somatostatin mRNA in the rat nervous system as visualized by a novel non-radioactive *in situ* hybridization histochemistry procedure	223
F. Javoy-Agid, E. C. Hirsch, S. Dumas, C. Duyckaerts, J. Mallet and **Y. Agid**	Decreased tyrosine hydroxylase messenger RNA in the surviving dopamine neurons of the substantia nigra in Parkinson's disease: an *in situ* hybridization study	245
H. Tokuno, Y. Nakamura, M. Kudo and **Y. Kitao**	Laminar organization of the substantia nigra pars reticulata in the cat	255
D. E. McBean, J. Sharkey, I. M. Ritchie and **P. A. T. Kelly**	Chronic effects of the selective serotoninergic neurotoxin, methylenedioxyamphetamine, upon cerebral function	271
M. Ravnborg, G. M. Knudsen and **M. Blinkenberg**	No effect of pulsed magnetic stimulation on the blood–brain barrier in rats	277
BOOK REVIEW **J. Szentágothai**	*Evolution of the Brain; Creation of the Self*. By J. Eccles	281
ERRATUM		283

VOLUME 38 NUMBER 2 1990

R. H. Scott, J. F. Wootton and **A. C. Dolphin**	Modulation of neuronal T-type calcium channel currents by photoactivation of intracellular guanosine 5′-*O*(3-thio) triphosphate	285
M. E. Rice and **C. Nicholson**	Glutamate- and aspartate-induced extracellular potassium and calcium shifts and their relation to those of kainate, quisqualate and *N*-methyl-D-aspartate in the isolated turtle cerebellum	295
K. J. Anderson, D. T. Monaghan, R. J. Bridges, A. L. Tavoularis and **C. W. Cotman**	Autoradiographic characterization of putative excitatory amino acid transport sites	311
G. Buzsáki, I. Laszlovszky, A. Lajtha and **C. Vadász**	Spike-and-wave neocortical patterns in rats: genetic and aminergic control	323

H.-L. Wang, T. Reisine and **M. Dichter**	Somatostatin-14 and somatostatin-28 inhibit calcium currents in rat neocortical neurons	335
F. J. Alvarez and **J. V. Priestley**	Anatomy of somatostatin-immunoreactive fibres and cell bodies in the rat trigeminal subnucleus caudalis	343
F. J. Alvarez and **J. V. Priestley**	Ultrastructure of somatostatin-immunoreactive nerve terminals in laminae I and II of the rat trigeminal subnucleus caudalis	359
M. M. Behbehani, M. Jiang and **S. D. Chandler**	The effect of [Met]enkephalin on the periaqueductal gray neurons of the rat: an *in vitro* study	373
F. G. Williams and **A. J. Beitz**	Ultrastructural morphometric analysis of enkephalin-immunoreactive terminals in the ventrocaudal periaqueductal gray: analysis of their relationship to periaqueductal gray–raphe magnus projection neurons	381
S. K. Chung, D. W. Pfaff and **R. S. Cohen**	Projections of ventromedial hypothalamic neurons to the midbrain central gray: an ultrastructural study	395
S. K. Chung, R. S. Cohen and **D. W. Pfaff**	Transneuronal degeneration in the midbrain central gray following chemical lesions in the ventromedial nucleus: a qualitative and quantitative analysis	409
C. W. Shults, R. Hashimoto, R. M. Brady and **F. H. Gage**	Dopaminergic cells align along radial glia in the developing mesencephalon of the rat	427
C. J. Chandler, W. Wohab, B. S. Starr and **M. S. Starr**	Motor depression: a new role for D_1 receptors?	437
N. K. MacLeod, A. Ryman and **G. W. Arbuthnott**	Electrophysiological properties of nigrothalamic neurons after 6-hydroxydopamine lesions in the rat	447
M. S. Evans, C. F. Zorumski and **D. B. Clifford**	Lithium enhances neuronal muscarinic excitation by presynaptic facilitation	457
B. N. Smith and **W. E. Armstrong**	Tuberal supraoptic neurons—I. Morphological and electrophysiological characteristics observed with intracellular recording and biocytin filling *in vitro*	469
W. E. Armstrong and **B. N. Smith**	Tuberal supraoptic neurons—II. Electrotonic properties	485
E. P. C. T. de Rijk, B. G. Jenks, H. Vaudry and **E. W. Roubos**	GABA and neuropeptide Y co-exist in axons innervating the neurointermediate lobe of the pituitary of *Xenopus laevis*—an immunoelectron microscopic study	495
G. Ju and **X. Zhang**	An electron microscopic study on substance P-like immunoreactive nerve fibers in the pars distalis of the adenohypophysis in the dog	503
J. W. Geddes, E. J. Hess, R. A. Hart, J. P. Kesslak, C. W. Cotman and **M. C. Wilson**	Lesions of hippocampal circuitry define synaptosomal-associated protein-25 (SNAP-25) as a novel presynaptic marker	515
R. Schmidt-Kastner, J. Szymas and **K.-A. Hossmann**	Immunohistochemical study of glial reaction and serum-protein extravasation in relation to neuronal damage in rat hippocampus after ischemia	527
I. L. Gibbins	Target-related patterns of co-existence of neuropeptide Y, vasoactive intestinal peptide, enkephalin and substance P in cranial parasympathetic neurons innervating the facial skin and exocrine glands of guinea-pigs	541

E. L. Sabban, J. Schwartz and **A. McMahon**	Effect of compounds which disrupt proton gradients on secretion of neurosecretory proteins from PC12 pheochromocytoma cells	561

VOLUME 38 NUMBER 3 1990

S. L. Lowe, D. M. Bowen, P. T. Francis and **D. Neary**	*Ante mortem* cerebral amino acid concentrations indicate selective degeneration of glutamate-enriched neurons in Alzheimer's disease	571
A. S. Rosen and **R. D. Andrew**	Osmotic effects upon excitability in rat neocortical slices	579
P. I. Pakhotin, A. B. Belousov and **N. A. Otmakhov**	Functional stability of the brain slices of ground squirrels, *Citellus undulatus*, kept in conditions of prolonged deep periodic hypothermia: electrophysiological criteria	591
A. B. Belousov, O. S. Vinogradova and **P. I. Pakhotin**	Paradoxical state-dependent excitability of the medial septal neurons in brain slices of ground squirrel, *Citellus undulatus*	599
T. H. Bullock, G. Buzsáki and **M. C. McClune**	Coherence of compound field potentials reveals discontinuities in the CA1–subiculum of the hippocampus in freely-moving rats	609
L. E. Sundström and **J. H. Mellanby**	Tetanus toxin blocks inhibition of granule cells in the dentate gyrus of the urethane-anaesthetized rat	621
E. Senba, D. M. Simmons and **L. W. Swanson**	Localization of neuropeptide precursor-synthesizing neurons in the rat olfactory bulb: a hybridization histochemical study	629
K. Semba, P. B. Reiner and **H. C. Fibiger**	Single cholinergic mesopontine tegmental neurons project to both the pontine reticular formation and the thalamus in the rat	643
P. Apicella, E. Trouche, A. Nieoullon, E. Legallet and **N. Dusticier**	Motor impairments and neurochemical changes after unilateral 6-hydroxydopamine lesion of the nigrostriatal dopaminergic system in monkeys	655
R. A. Leslie, D. J. M. Reynolds, P. L. R. Andrews, D. G. Grahame-Smith, C. J. Davis and **J. M. Harvey**	Evidence for presynaptic 5-hydroxytryptamine$_3$ recognition sites on vagal afferent terminals in the brainstem of the ferret	667
E. A. J. Joosten, A. A. M. Gribnau and **T. G. M. F. Gorgels**	Immunoelectron microscopic localization of cell adhesion molecule L1 in developing rat pyramidal tract	675
P. Geppetti, M. Tramontana, P. Santicioli, E. Del Bianco, S. Giuliani and **C. A. Maggi**	Bradykinin-induced release of calcitonin gene-related peptide from capsaicin-sensitive nerves in guinea-pig atria: mechanism of action and calcium requirements	687
D. A. Haas, W. C. Sturtridge and **S. R. George**	Differential alpha-1 and alpha-2 adrenergic effects on hypothalamic corticotropin-releasing factor and plasma adrenocorticotropin	693
V. Mitchell, J. C. Beauvillain and **M. Mazzuca**	Effects of inhibition of GABA catabolism by aminooxyacetic acid on enkephalinergic neurons—immunocytochemical and ultrastructural study in the enkephalinergic hypothalamoseptal tract of the guinea-pig	703

E. Huston, R. H. Scott and **A. C. Dolphin**	A comparison of the effect of calcium channel ligands and $GABA_B$ agonists and antagonists on transmitter release and somatic calcium channel currents in cultured neurons	721
C. C. Chang, C. Y. Huang and **S. J. Hong**	Organic calcium channel antagonists provoke acetylcholine receptor autodesensitization on train stimulation of motor nerve	731
T. Sakurai, K. Ohmi, H. Kurokawa and **Y. Nonomura**	Distribution of a gelsolin-like 74,000 mol. wt protein in neural and endocrine tissues	743
Y. O. Taiwo and **J. D. Levine**	Direct cutaneous hyperalgesia induced by adenosine	757
J. L. Rosenheimer	Ultraterminal sprouting in innervated and partially denervated adult and aged rat muscle	763
P. A. Steele and **M. Costa**	Opioid-like immunoreactive neurons in secretomotor pathways of the guinea-pig ileum	771
M. Tonini and **M. Costa**	A pharmacological analysis of the neuronal circuitry involved in distension-evoked enteric excitatory reflex	787
F. W. Schürmann and **J. Erber**	FMRFamide-like immunoreactivity in the brain of the honeybee (*Apis mellifera*). A light- and electron microscopical study	797
C. De Rycker and **E. Schoffeniels**	Molecular aspects of human brain sodium channel	809
S.-W. Cho and **J. G. Joshi**	Characterization of glucose-6-phosphate dehydrogenase isozymes from human and pig brain	819
F. Viana, L. Gibbs and **A. J. Berger**	Double- and triple-labeling of functionally characterized central neurons projecting to peripheral targets studied *in vitro*	829
L. Slomianka, G. Danscher and **C. J. Frederickson**	Labeling of the neurons of origin of zinc-containing pathways by intraperitoneal injections of sodium selenite	843